

**Amendments to the Claims**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims**

1 – 42. (Cancelled)

43. (Currently amended) A method of deriving engine cylinder mechanical top dead centre comprising measuring cylinder pressure during a cylinder cycle, constructing a pressure variation function and deriving a thermodynamic top dead centre therefrom, wherein said thermodynamic top dead centre is derived at a maximum pressure point of a motoring pressure curve and wherein the mechanical top dead centre is obtained by applying an offset to the thermodynamic top dead centre, wherein said offset is a measure of a thermodynamic loss angle between the thermodynamic top dead centre and the mechanical top dead centre.

44. (Cancelled)

45. (Currently amended) A method as claimed in claim [44] 43 in which the motoring pressure is derived by skip firing an engine cylinder.

46. (Currently amended) A method as claimed in claim [44] 43 in which the maximum pressure is interpolated from the motoring pressure curve.

47. (Cancelled)

48. (Currently amended) A method as claimed in claim 47 43 in which the offset is derived from a map or model.

49 – 51. (Cancelled)

52. (Previously presented) A method as claimed in claim 43 further comprising the timing of a combustion event in an engine cylinder by obtaining a combustion timing control value as a function of the derived top dead centre.

53. (Previously presented) A method as claimed in claim 52 in which a combustion event comprises a spark induced event of a compression induced event.

54. (Cancelled)